

About the text/CSV test data file creation tool

DTM Flat File Generator is an easy-to-use tool that helps you to create test files: Unicode (UTF-16) or ANSI depends on project settings. It supports tab-delimited, comma-separated output as well as fixed width files or files with user defined separators.

The generator's project corresponds to single output file. The project file stores columns definitions and general properties like file format or number of rows to be generated. The tab-based interface enables user to operate with a few opened projects at once

Each file column (or field) has a few properties like name and size*. Most of them are optional. But you must specify [generator](#) for each field. The generator is a rule that the program will use to create test data.

You can specify file structure manually by adding columns line by line. Otherwise, the program can help you to [import structure](#).

Data Columns :

Name	Width	Generator	Sample
<input type="checkbox"/> FirstName	25	First Name	Tonette
<input type="checkbox"/> LastName	20	Last Name	Cabe
<input type="checkbox"/> PhoneNo	14	Phone	(270) 4521948
<input type="checkbox"/> e-mail	25	e-mail	Lashawnda@ambac.com
<input type="checkbox"/> ZIP	4	ZIP Code	2532
<input type="checkbox"/> Position	22	Position	Insurance Clerk

Column #3 :

Column Name : PhoneNo Width : 14

Generator : Phone

Options : Format \(\NNN\) NNNNNNNN

Format
Phone or fax number format.

Sample Data : (077) 5718298
(665) 1323089
(095) 8502392
(976) 3577183
(986) 7837968
(272) 1226178

Pattern : \(\NNN\) NNNNNNNN

Output File

File Format : Delimited By Tab 110 Encoding : UTF-16

File Name : e:\person.txt

Rows : 10 000 000 000

The first row contains column names

Append mode

Ready CAP

Notes

- * - the program uses column size (or width) for "fixed width" output format only.
- the tool accepts \$DATE\$ and \$TIME\$ macros in the output file name.

Quick Start

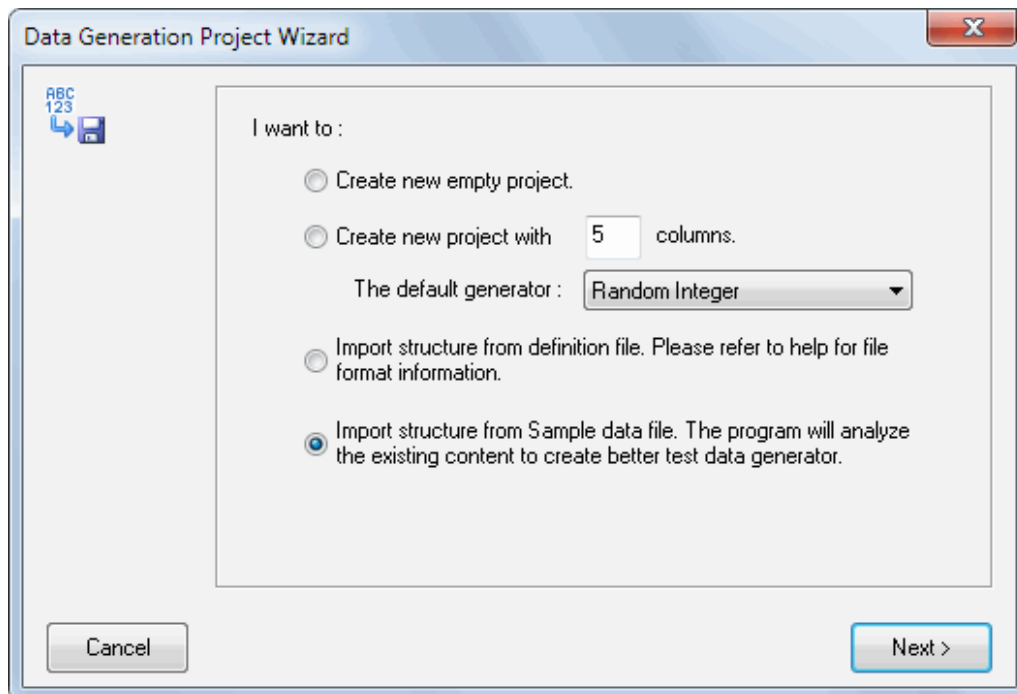
There are only two mandatory steps to generate your data file: structure specification and output file selection.

To specify file structure the user should add a few column descriptions or [import](#) it from another file.

The most important column property is 'generator', i.e. fill out method (type and properties) for the field. The user should select it from [menu](#) and change [options](#), if necessary.

\$DATE\$ and \$TIME\$ macros can be used as a part of the output file name.

To start new project file easy the tool offers a wizard. The wizard helps the user to create new project and import data from example or definition file by a few clicks:



The main window of the tool consists of three blocks:

- Column list (left side)
- Currently selected column properties (right side)
- Output file properties (bottom side of the main window).

The column properties block has:

- Column name. It is optional, 'FieldN' will be used by default.
- Column size or width. This setting is also optional except "fixed width" output. The maximum field width is 4096 symbols.
- The generator is the only mandatory parameter.
- Generator options. The options depend on generator type and available not for all generators.
- Sample output. It shows a few generated values for the generator and options.
- Pattern. For most cases, it is read only and present for information purpose only. The user can modify this text for 'custom generator'.

To add column click "Add" toolbar button or select the menu item. To modify existing column properties select the corresponding line in the list and change property at the right side of the window. To drop column select it and click "Delete" toolbar button.

Import Structure

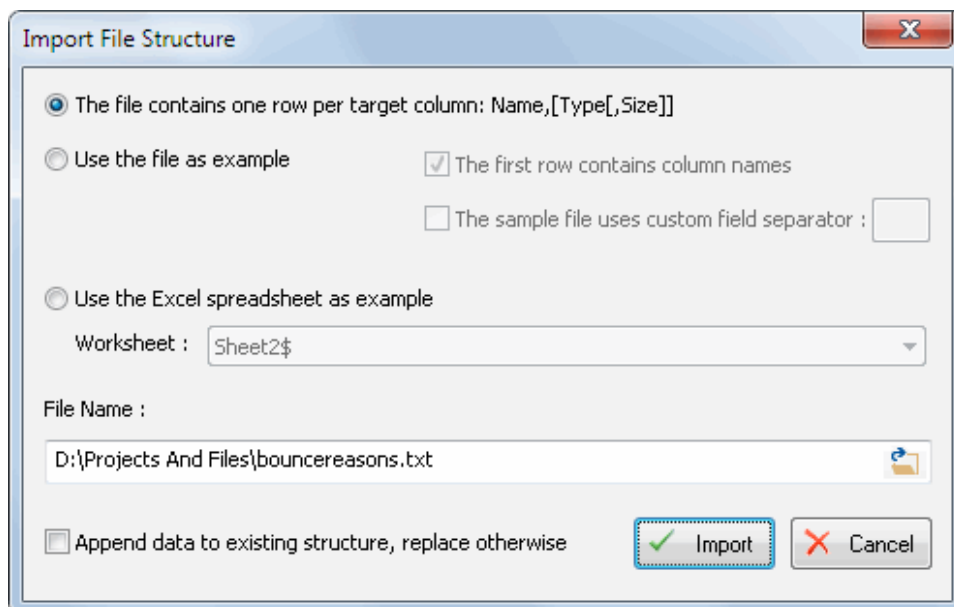
The program supports import from two different formats.

In the **first case** source file must contain one row per field:
FileName[,DataType[,Size]]

Sample input data:
OrderID,Integer
Customer,String,32
OrderDate,Date

In the **second case** the program accepts sample plain text file or Excel spreadsheet. This file must have same structure as should be created. The import option for plain text file supports tab-delimited, comma-separated and fixed width* file formats as example. Also, the user enabled to define custom field separator.

By default the import procedure replaces existing structure. To append import result use "Append data..." check box.



* - the program expects at least one space between column names for this case.

Export Structure

The program supports export file structure to following formats.

In the **first case** file will contain one row per field:
FileName[,Data Type[,Size]]

Sample input data:
OrderID,Integer
Customer,String,32
OrderDate,Date

In the **second case**, it is SQL script that contains CREATE TABLE statement. The data type and size of each column have to be specified for this type of export.

Export File Structure

The file contains one row per target column: Name,Type[,Size]

Export as CREATE TABLE statement. Table name is :

File Name :

D:\Projects And Files\countries_with_currency.txt

File Encoding :

Unicode (UTF16)

Export Cancel



Quoting Rules

The program uses following quoting rules:

- It always uses double quotation mark(") for quoting.
- It always double "" sign in the value.
- It quotes value that contains currently selected separator or has "" (double quote) sign inside.

Examples

- If current format is CSV, 'red,gree,blue' value will be saved as ""red,gree,blue""
- If current format is tab-delimited, 'red,green,blue' value will be saved as 'red,green,blue' i.e. without quoting
- 'He said "hello"' value will be saved as ""He said ""hello"""" for any delimiter.

Project Properties

The project properties window enables users to define some optional project information like author and comment. DTM Flat File Generator does not use this information in the generation process. However, it helps your team to manage and organize project files.

Project Properties

This list defines project level settings, options and properties

Property	Value
General	
Author	Support Team
Note	The sample shows personal data generation options

Note
The data generation project description [optional]

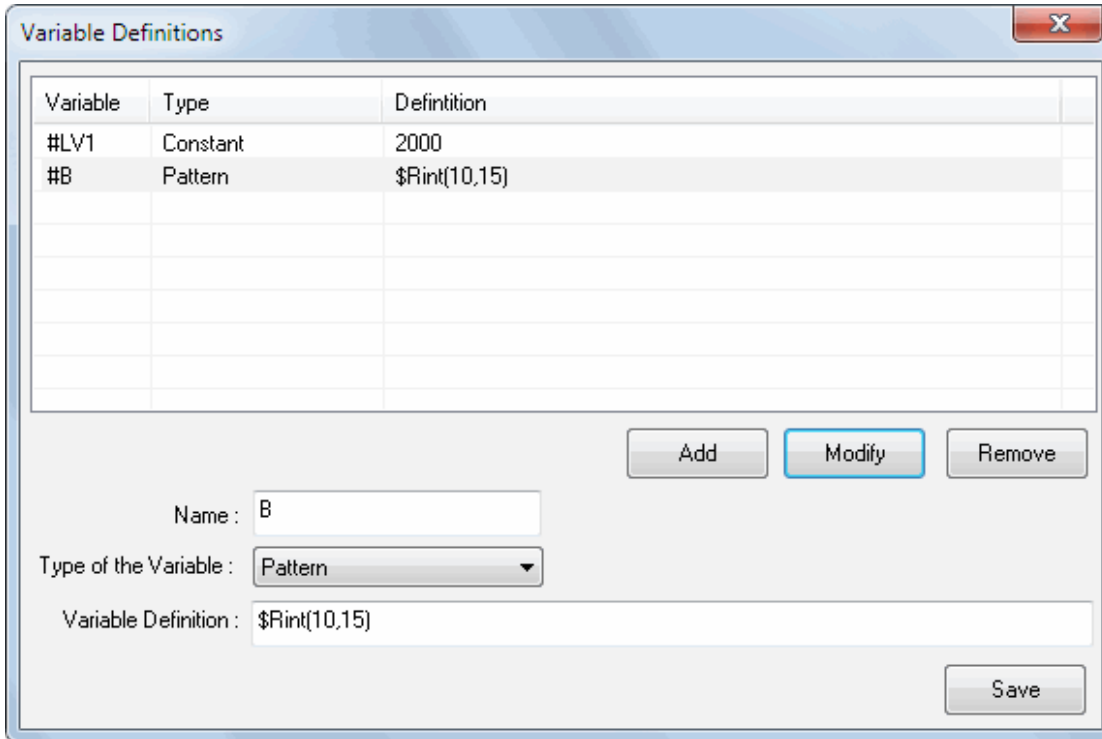
Save Cancel

Variables

The variable is a way to define a common value for a few data generation rules. In most cases, variables can be used in Custom Data generators only. Please refer to Pattern Engine Manual for details.

Also, the variable can be used as a part of output file name.

This window helps the user to create, modify and remove variables:



The dialog box titled "Variable Definitions" contains a table with the following data:

Variable	Type	Defintion
#LV1	Constant	2000
#B	Pattern	\$Rint(10,15)

Below the table are three buttons: "Add", "Modify", and "Remove".

Below the buttons are three input fields:

- Name : B
- Type of the Variable : Pattern
- Variable Definition : \$Rint(10,15)

A "Save" button is located at the bottom right of the dialog box.



Execution Modes

There are two execution modes: default and checked columns only.
In the second case, the program produces data for only columns checked in the list.

See also: [console mode](#).



Project Wizard

The project wizard provides the user with access to all ways to create a new project file. There are:

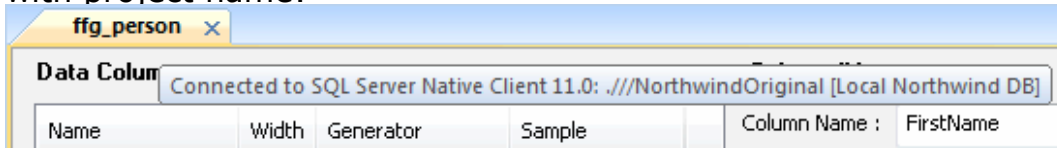
- Empty project creation.
- Project with a few predefined columns and same generators like a random number or a random string.
- Import file structure from the definition file.
- Creation a project based on sample file with data.

Default Database Connection

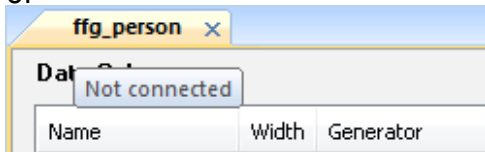
The user allowed to specify optional "Default database connection". The [software](#) will use this connection properties in database related functions call: \$Table, \$Query, etc. The tool saves and restores default connection between sessions automatically.

To establish and cancel default connection use related menu items in the "Project" submenu or toolbar buttons. The hot keys are also available.

The program shows default connection properties for the current project as tooltip for tab with project name:



or



Note: please don not establish default connection if the project don't use it actually by performance reason.

See also:

- [Connection](#) options.
- [SQL Console](#) feature.

Connection Quick Start Guide

Database	How to connect
MS SQL Server	Enter or select server name at the direct connection panel
Local SQL Server Express	Enter .\SQLEXPRESS as server name at the direct connection panel
Oracle	1) Switch to data sources mode 2) select OCI as "Interface" 3) select your service name from data source drop-down menu
DB2	Use direct connection panel or Use predefined ODBC DSN for custom connection settings
MySQL	Install ODBC driver for MySQL from www.mysql.org Use direct connection panel or Use predefined ODBC DSN for custom connection settings
PostgreSQL	Use direct connection panel or Use predefined ODBC DSN for custom connection settings
Interbase/Firebird	Install ODBC driver Use direct connection panel or Use predefined ODBC DSN for custom connection settings
Microsoft Access	1) Switch to " Desktop File " panel 2) Select "Access" as file type, enter or select file name
Microsoft Excel	1) Switch to " Desktop File " panel 2) Select "Excel" as file type, enter or select file name
<i>Another database</i>	1) Install ODBC driver for your database system 2) Create ODBC data source name using Windows ODBC Administrator 3) Switch to data sources mode 4) select your data source from drop down menu

Direct Connection

The direct connection method allows you to connect to most popular databases ([MS SQL Server](#), [Oracle](#), [Interbase/Firebird](#), [MySQL](#), [PostgreSQL](#) and [DB2](#)).

Enter the server name and the database name, if required. The user name and password are optional. Their necessity depends on the settings of your database. The owner name (schema) is optional too. The list of visible database objects depends on the choice of the owner. If the owner is empty, you will access all objects. There is important that schema/owner name is case sensitive.

If you do not find the required database type in the list or cannot connect directly, use a connection through the predefined data source. If DBMS is in the list, but unavailable, it means that either the required ODBC driver is not installed or it is not configured properly. During its use, the program stores the entered values of server names, users and owners. You can select a value from the stored list using the corresponding combo box. For some DBMS types (MS SQL, for example), the program can fill the list of available databases. Use the button with two arrows for this purpose.

Direct Database Connections to most popular databases

Microsoft SQL Server
 Oracle Database
 MySQL
 Interbase/Firebird
 IBM DB2
 PostgreSQL

Note: If you do not find the required database type in the list or cannot connect directly, use a connection through the predefined Data Source.

Server: DTM-XP\SQLEXPRESS

Windows Authentication (trusted connection)

User (login): Admin

Password: []

Database: Northwind

Owner/schema: dbo

Note: Express @XP

DBMS-specific connection options

Microsoft SQL Server

- "(local)", empty or "." server name means local server
- use <server name>\<instance name> syntax to identify instance. Example: `.\SQLEXPRESS` means SQL Express at the local system

Oracle

Use connect string for the Oracle Server that you want to access as a Server name.

Important: it is strongly recommended to use native Oracle Call Interface ([OCI](#)) instead of direct connection.

Interbase and Firebird

Examples:

- Server: **localhost** and Database **c:\interbase\myDb.fdb** - connect to specified DB on local system.
- Server: **172.17.2.10/3051** and Database **/usr/local/db/myDb.fdb** - connect to specified server with alternate port 3051 on remote system 172.17.2.10

MySQL

- Use **localhost** for local MySQL
- `example.com;port=3306` means MySQL at example.com on 3306 port

DB2

ServerName;port=5000;protocol=TCPIP as a server name means connect to ServerName, use 5000 port and TCP/IP protocol.

PostgreSQL

ServerName as a server name means connect to ServerName, use 5432 port and TCP/IP protocol. Database name is required. localhost as a server name is acceptable. To specify custom port you should add `";port=NNNN"` string to server name.

server_name_or_ip-address;port=5432;DATABASE=dbname

Desktop Files

The second way is designed for connecting to desktop data files. Select the required format and specify the file name or the directory where the data is located. Other parameters are optional.

Connections to Desktop Data File

Text file (*.txt, *.csv) Format: CustomDelimiter ANSI Delimiter: |

Microsoft Access file (*.mdb, *.accdb) use Microsoft Jet (ODBC by default)

dBase, FoxBase or FoxPro file (*.dbf)

Microsoft Excel file (*.xls, *.xlsx, *.xlsb)

Paradox file (*.db)

FoxPro database container (*.dbc)

SQLite database

Location: D:\Projects And Files\tickets.mdb Browse...

Authentication information, optional: Read Only mode

User / Login:

Password: Note: Tickets

Predefined data sources: ODBC, IDAPI, Oracle Call Interface

A connection with the use of a data source is the most universal. You can select ODBC, IDAPI or OCI (if installed) interface and the preconfigured data source name. In this case, other options are similar to those of a direct connection. The "Manage" button allows you to get access to the external configuration utility if it is available. When you want to access the tables belonging to the single database schema (or owner), you should fill the "owner" entry; otherwise, all tables will be accessed.

Connections to existing and configured data sources

Interface	<input type="text" value="ODBC"/>	<input type="checkbox"/> Manual commit
Data source	<input type="text" value="localserver"/>	<input type="button" value="Manage..."/>
User (login)	<input type="text" value="sa"/>	
Password	<input type="password" value="xxxxxx"/>	
Database	<input type="text" value="Northwind"/>	
Owner	<input type="text" value="dbo"/>	
Note	<input type="text" value="Local SQL Server"/>	

DSN File

The fourth way is using a DSN file. For this case, just select the file name with DSN definition.

Connections to existing and configured file DSN

File DSN name

Note

OLE DB connection

Use 'Configure' button to specify connection information. Password and owner fields are optional.

Connections using OLE DB providers

Connection properties Configure...

```
Provider=SQLOLEDB.1;  
Persist Security Info=False;  
User ID=sa;  
Initial Catalog=Northwind;  
Data Source=DTM-ACER2;  
Use Procedure for Prepare=1;  
Auto Translate=True;  
Packet Size=4096;
```

Password

Owner

Note

Connection Profiles

Connection profile helps you to save information about your connection (interface, data source or alias name, user name (login), password and database name, etc) and get access it by the one click.

Please fill connection properties and press "Add as new" to add a new profile. To modify the profile you should select it from the list at the top of the window, modify properties and press "Update". "Delete" button works when you select the profile to be deleted in the list.

"Save" and "Load" buttons allow you to save profiles to the disk file or load them. The "Export one" button helps to save single currently selected profile.

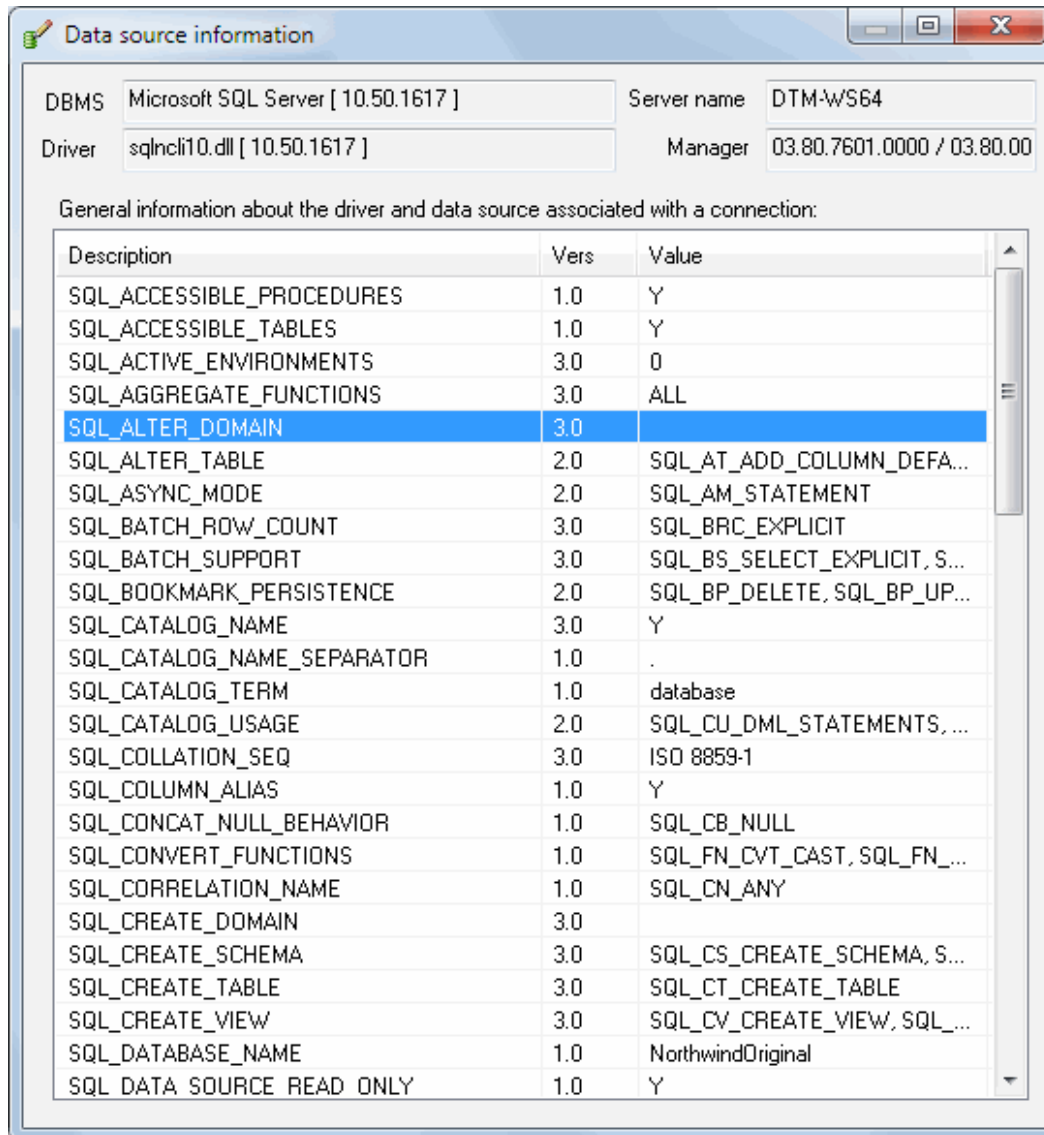
Important: all profiles are shared between all installed DTM soft products. That means once created profile can be used with any tool. At the other side if you remove the profile from the list you can't use it with DTM soft's products anymore.

Mode	Interface	Source or Server	User	Owner	Database	Note
Direct	ODBC	.			Northwind	Local server
Direct	ODBC	DTM-XP	sa		AdventureWorks	
Direct	ODBC	.		dbo	NorthwindOriginal	Local Read Only DB
DSN	ODBC	Saramdb				SaraMDB
DSN	ODBC	test_new				Test MDB
Desktop	ODBC	ACCESS				Test MDB
DSN	ODBC	test_old				Test MDB
Direct	ODBC	.		dbo		
Direct	ODBC	.		dbo		2
DSN	OCI	ORCL	OE			ORCL/OE
DSN	ODBC	ORCL_ODBC	OE	OE		ORCL/ODBC
DSN	OCI	10G	OE			Oracle 10g (VM)

Buttons: Add as New, Update profile, Remove profile, Export One..., Save..., Load...

Connection Information

The program provides detailed database, connection and driver information and properties. The "Information" button at the connect window allows you to view it.



The screenshot shows a window titled "Data source information" with the following fields:

- DBMS: Microsoft SQL Server [10.50.1617]
- Server name: DTM-WS64
- Driver: sqlncli10.dll [10.50.1617]
- Manager: 03.80.7601.0000 / 03.80.00

General information about the driver and data source associated with a connection:

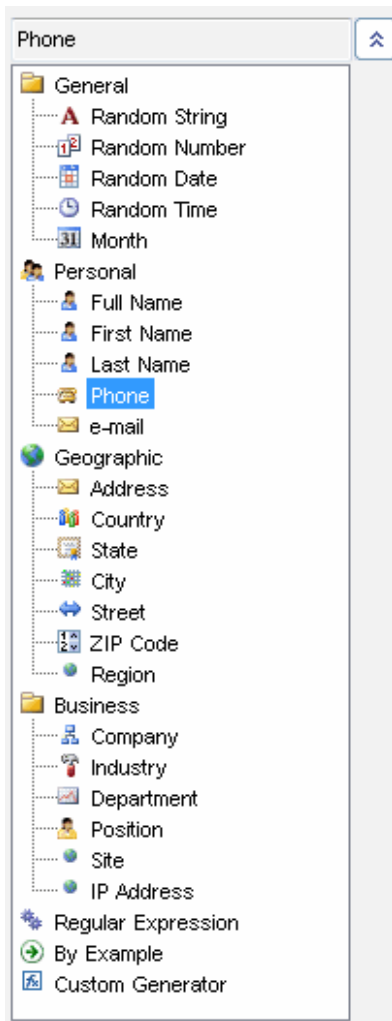
Description	Vers	Value
SQL_ACCESSIBLE_PROCEDURES	1.0	Y
SQL_ACCESSIBLE_TABLES	1.0	Y
SQL_ACTIVE_ENVIRONMENTS	3.0	0
SQLAggregate_FUNCTIONS	3.0	ALL
SQL_ALTER_DOMAIN	3.0	
SQL_ALTER_TABLE	2.0	SQL_AT_ADD_COLUMN_DEFA...
SQL_ASYNC_MODE	2.0	SQL_AM_STATEMENT
SQL_BATCH_ROW_COUNT	3.0	SQL_BRC_EXPLICIT
SQL_BATCH_SUPPORT	3.0	SQL_BS_SELECT_EXPLICIT, S...
SQL_BOOKMARK_PERSISTENCE	2.0	SQL_BP_DELETE, SQL_BP_UP...
SQL_CATALOG_NAME	3.0	Y
SQL_CATALOG_NAME_SEPARATOR	1.0	.
SQL_CATALOG_TERM	1.0	database
SQL_CATALOG_USAGE	2.0	SQL_CU_DML_STATEMENTS, ...
SQL_COLLATION_SEQ	3.0	ISO 8859-1
SQL_COLUMN_ALIAS	1.0	Y
SQL_CONCAT_NULL_BEHAVIOR	1.0	SQL_CB_NULL
SQL_CONVERT_FUNCTIONS	1.0	SQL_FN_CVT_CAST, SQL_FN_...
SQL_CORRELATION_NAME	1.0	SQL_CN_ANY
SQL_CREATE_DOMAIN	3.0	
SQL_CREATE_SCHEMA	3.0	SQL_CS_CREATE_SCHEMA, S...
SQL_CREATE_TABLE	3.0	SQL_CT_CREATE_TABLE
SQL_CREATE_VIEW	3.0	SQL_CV_CREATE_VIEW, SQL_...
SQL_DATABASE_NAME	1.0	NorthwindOriginal
SQL DATA SOURCE READ ONLY	1.0	Y

Troubleshooting Guide

Problem description	Possible reason	Solutions
Required database type not present in the list at Direct Connection and Desktop Connection pages		Switch to "data source" connection mode and select data source from the list or configure new one with "Manage" button.
Required format is in the direct connection list, but not available (disabled).	ODBC driver for your database does not installed or not configured properly.	Install required driver. If it is already present in the system, please contact our support staff .
Errors during direct connection.	Compatibility problems.	Try to create data source for your database connection.
Login error for correct user name and password.	Read-only desktop data file.	Try to change file mode to 'read and write'.
I can't see relationships, defaults, etc in my Access Database.	Access interface.	Try to switch on "Use Microsoft Jet" check box at the "Desktop File" page of the Connect Window.

Generator Selection

This menu allows you to select data generator for the current data field. To select suitable generator double-click required tree item.



Notes

The value library has more predefined data sets like currencies, colors, national first and last names, occupations, etc. The user should select custom generator and \$Lib function to access mentioned data collections.

The program adds value length limitation for value from library for the following items: 'Full Name', 'First Name', 'Last Name', 'Country', 'State', 'City', 'Street', 'Region', 'Company', 'Industry', 'Department' and 'Position'. The limitation will be applied to columns with defined width (>0 symbols).

A few generators have options like format or value range:

- [Random string generator](#)
- [Random number generator](#)
- [Random date generator](#)
- [Random time generator](#)
- [By file generator](#)
- [By Excel Generator](#)
- [By Table Generator](#)
- [Phone/Fax Generator](#)
- [Address Generator](#)
- [Regular Expression](#)
- [Data by Example](#)
- [Custom Generator](#)

Random String Generator Options

The only string generator option is a length range.

Generator :	Random String	▼
Options :	Length from	1
	Length to	10
	Length from Minimum string length to be generated [optional, default is 1]	
Sample Data :	A RYFCABYJ OQCLTT UM KNW RVUTFEQ	

Random Number Generator Options

The "Random Number" generator has following settings. All of them are optional.

- Value range. The default is 0 and 32000.
- Value width, i.e. number of symbols in the output value. The default is data driven, the maximum is 32 symbols.
- Decimal digits. The default is 0 (integer value), the maximum is 9.
- Leading zeros mode. If this mode is switched on together with width, the program will pad value by '0': '002' instead of '2' for width is 3 for example. This mode is switched off by default and user has to enter 'width' greater than 0 to be able to use it.

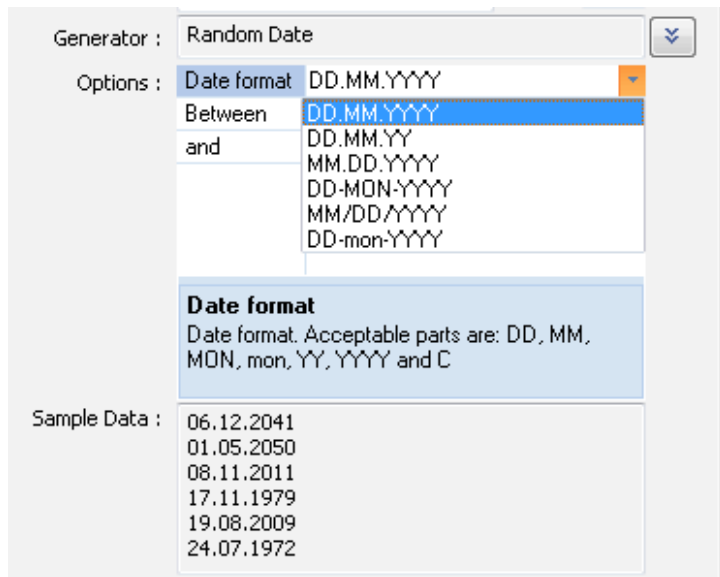
Generator :	Random Number	▼
Options :	Minimum	
	Maximum	
	Width	
	Decimal digits	
	Leading zeros	False
Minimum Minimum value to be generated [optional, default is 0]		
Sample Data :	6221 11838 2667 22490 21979 17496	

Random Date Generator Options

There are two options for the random date generator: date format and value range.

The user can select date format from the drop-down list as well as enter in manually. It is important to use the same format in the date range definition.

Please refer to "Pattern Engine Manual" for detailed information about acceptable format items.



The screenshot shows a software interface for the 'Random Date Generator'. The 'Generator' is set to 'Random Date'. Under 'Options', the 'Date format' is currently 'DD.MM.YYYY'. A dropdown menu is open, showing a list of available date formats: 'DD.MM.YYYY' (highlighted), 'DD.MM.YY', 'MM.DD.YYYY', 'DD-MON-YYYY', 'MM/DD/YYYY', and 'DD-mon-YYYY'. Below the dropdown, a 'Date format' section explains that acceptable parts are DD, MM, MON, mon, YY, YYYY, and C. The 'Sample Data' section displays a list of generated dates: 06.12.2041, 01.05.2050, 08.11.2011, 17.11.1979, 19.08.2009, and 24.07.1972.

Generator :	Random Date
Options :	Date format DD.MM.YYYY
	Between DD.MM.YYYY
	and DD.MM.YY
	MM.DD.YYYY
	DD-MON-YYYY
	MM/DD/YYYY
	DD-mon-YYYY
	Date format Date format. Acceptable parts are: DD, MM, MON, mon, YY, YYYY and C
Sample Data :	06.12.2041 01.05.2050 08.11.2011 17.11.1979 19.08.2009 24.07.1972

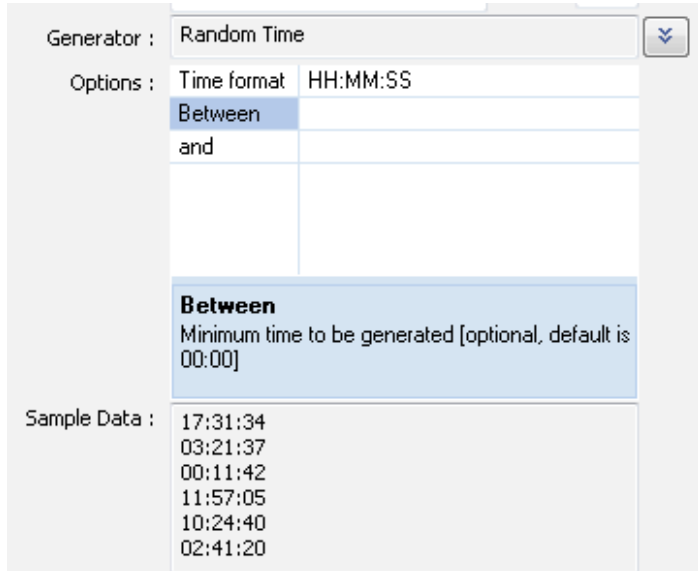
The user allowed changing default date format using [Settings](#) window.

Random Time Generator Options

There are two options for the random time generator: time format and value range.

The user can select time format from the drop-down list as well as enter in manually. It is important to use the same format in the time range definition.

Please refer to "Pattern Engine Manual" for detailed information about acceptable time format items.



The screenshot shows a dialog box titled "Random Time Generator Options". It has a "Generator" dropdown menu set to "Random Time". Under "Options", there is a "Time format" field set to "HH:MM:SS". Below that is a "Between" and "and" section with two empty input fields. A tooltip is visible over the "Between" field, displaying the text: "Between Minimum time to be generated [optional, default is 00:00]". At the bottom, the "Sample Data" section lists five time values: 17:31:34, 03:21:37, 00:11:42, 11:57:05, 10:24:40, and 02:41:20.

Generator :	Random Time
Options :	Time format HH:MM:SS
	Between
	and
	Between Minimum time to be generated [optional, default is 00:00]
Sample Data :	17:31:34 03:21:37 00:11:42 11:57:05 10:24:40 02:41:20

The user allowed changing default time format using [Settings](#) window.

By File Generator Option

This window helps the user to select a source file for this generator.

Generator :	File		▼
Options :	File name	D:\Projects And Files\Parent.txt	
Sample Data :	16256	53972	6256
	19063	56314	9063
	13402	57534	3402
	19903	51795	9903
	14756	60281	4756
	15732	71006	5732

By MS Excel Generator Option

This window helps users to select spreadsheet for this generator. Also, the user has to enter worksheet name and required column.

Generator :	Excel Spreadsheet	
Options :	Spreadsheet	D:\Projects And Files\Zipcode.xls
	Worksheet	Sheet1
	Column	City
Sample Data :		
Milwaukee		
Fairborn		
Cape Girardeau		
Milwaukee		
Fairborn		
Dayton		

By Database Table Generator Option

This window helps users to select table and column of the [default database](#) to be set as a data source for the generator.

Generator :	Database Table	
Options :	Table	dbo.Employees
	Column	FirstName
	Table Database table name. The default database connection is required.	
Sample Data :	Anne Andrew Janet Andrew Laura Anne	

Phone Number Generator Options

The only phone number generator option is phone format. By default, it is (NNN) NNNNNNN
Other useful patterns are:


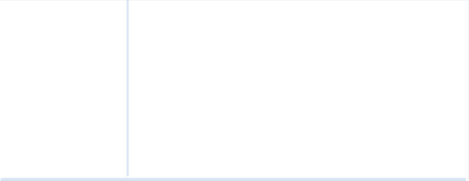
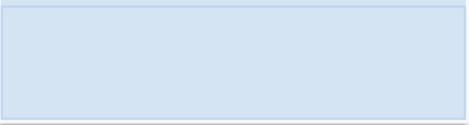
- +N NNN NNN-NNNN (international number with separators).
- NNN.NN.NN (local number with '.' as separator).
- \ (NNN\) NNNNNNN NNN (number with 3-digits extension).

The screenshot shows a software interface for generating phone numbers. It features a 'Generator' dropdown set to 'Phone', an 'Options' dropdown set to 'Format', and a 'Sample Data' section. The 'Options' dropdown is open, showing a list of phone number patterns. The 'Sample Data' section displays several example phone numbers.

Generator	Options	Sample Data
Phone	Format	(474) 8757998 (494) 6489692 (617) 1815365 (096) 0804083 (052) 6669577 (066) 5581761

Address Generator Options

The address generator has only one option. It is a pattern of the address. By default, the program produces the pair of the number between 1 and 250 and the street name.

Generator :	Address 	
Options :	Format	\$RInt(1,250), \$Lib(Streets)
		
		
Sample Data :	136, Kulik Circle 18, Greece Drive 158, High Burnside Avenue 27, Hillview Avenue 31, South Salem Drive 211, Elsie Place	

Generator based on Regular Expression

This generator produces value based on specified regular expression.

Generator :	Regular Expression	⌵
Options :	Expression	\{[1-9]{3}\} [0-9]{3}-[0-9]{2}-[0-9]{2}
Sample Data :	<pre>(135) 920-49-45 (727) 595-38-20 (446) 738-54-11 (371) 282-74-40 (929) 542-58-78 (174) 691-67-70</pre>	

Supported options

- The program supports standard UNIX-style regular expressions except items mentioned in 'Limitations' section.
- \d means digit
- \w means letter digit or '_'
- \s means space symbols
- Repeaters: {n} means exact n times, {n,m} means between n and m times

Limitations

- The generator ignores '\$' and '^' signs for begin and end.
- The program does not support negative ranges like [^0-9].
- Only \1 to \9 blocks can be used.


Data by Examples feature

This generator allows users to enter a few sample data values. The tool will create optimal data generation pattern automatically. At least 3-4 sample data rows are required for analyzing.

Generator :	By Example	▼
Options :	Examples	AA-0-C,FG-6-P,NT-8-I
	Examples Comma separated list of sample values.	
Sample Data :	N-8-I N-8-I 5D-6-J DV-6-E N-8-I N-8-I	


Custom value generator options

This feature allows the user to enter any acceptable "pattern". Please refer to "Pattern Engine Manual" ('i' button at the right side) for detailed information about acceptable format patterns.

Generator : Custom Generator 

Sample Data :

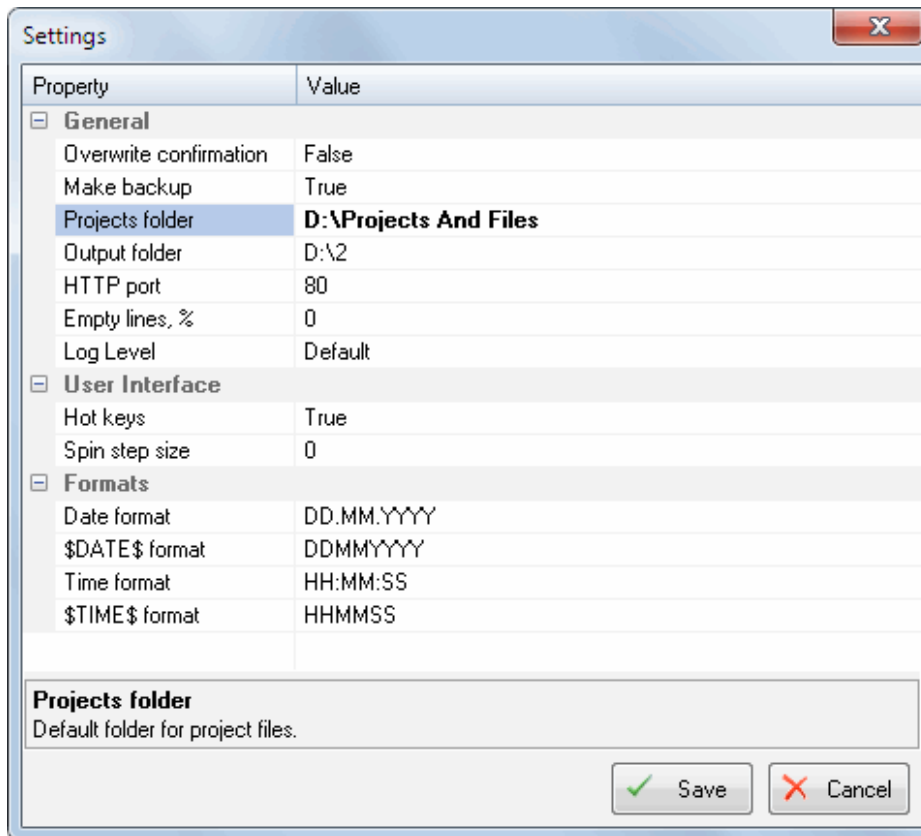
```
01.01.1970 JX 00:00:00 9
01.01.1970 JD 00:00:00 4
01.01.1970 DX 00:00:00 3
01.01.1970 FF 00:00:00 1
01.01.1970 TB 00:00:00 2
01.01.1970 VD 00:00:00 5
```

Pattern : \$Date() AA \$Time() N 

Product Settings

This page allows the user to tune the generator behavior. The most important settings are:

- Empty line share. The default is 0 percent.
- Date and time format for the output file.
- Date and time format for macros: \$DATE\$, \$TIME\$
- .BAK file creation feature.
- Default directories for projects and output data files.
- Log level



The screenshot shows a 'Settings' dialog box with a table of properties and values. The 'Projects folder' is highlighted in blue. Below the table, there is a section for 'Projects folder' with a description. At the bottom, there are 'Save' and 'Cancel' buttons.

Property	Value
General	
Overwrite confirmation	False
Make backup	True
Projects folder	D:\Projects And Files
Output folder	D:\2
HTTP port	80
Empty lines, %	0
Log Level	Default
User Interface	
Hot keys	True
Spin step size	0
Formats	
Date format	DD.MM.YYYY
\$DATE\$ format	DDMMYYYY
Time format	HH:MM:SS
\$TIME\$ format	HHMMSS

Projects folder
Default folder for project files.

Save Cancel

Versions 1.x, 2.x and 3.x comparison

The following table helps you to understand differences between 2.x and 3.x families of DTM Flat File Generator.

Option	2.x	3.x
Unicode output support	Two different version	Integrated
Unicode import and export support	No	Yes
A few projects in the workplace	No	Yes
Local clipboard for column definition	No	Yes
The main form resizing model	Basic	Adaptive
Data type support	Manually	Automatically
Default connection	Common option	Project level option
Advanced options for "random number" generator	No	Yes
Advanced options for "Excel spreadsheet" generator	No	Yes
Project drag-n-drop operation	Replaces project	Includes to workplace
New Microsoft Excel format (*.xlsx) support	Basic	Complete

The following table helps you to understand differences between 1.x and 2.x families of DTM Flat File Generator.

Option	1.x	2.x
Maximum number of rows to be generated	50,000,000 ¹⁾	Unlimited
Number of CPU/cores can be used	1	up to 32²⁾
Predefined data generators	25	28
Console mode	No	Yes
Run for checked columns feature	No	Yes
Additional project properties	No	Yes
\$DATE\$ and \$TIME\$ macros format tuning	No	Yes
Unicode edition	No	Yes
x64 edition	No	Yes³⁾
Project file format	.DGP	.FFGP⁴⁾

1) - 10,000,000 for versions 1.50 and older.

2) - depends on rules complexity: row-to-row and column-to-column dependencies, etc.

3) - available for registered users by demand.

4) - not compatible with DTM Data Generator and 1.x version of DTM Flat File Generator. The old fashion project file import is available starting release 2.05

DTM Flat File Generator supports following command line switches:

-c - console mode* .

--<N> - force use N CPU/cores mode.

Also, you can use one or more project names as a command line parameter(s). If the user provides a few project files in console mode they will be executed sequentially.

Example: FlatFileGen.exe -c d:\project1.ffgp d:\project2.ffgp d:\project3.ffgp

* - the console mode is a mode when the program doesn't open any dialogs and doesn't need any interference from the user. A project file for the console mode must be prepared and tested beforehand. If necessary, the program will use the recent database connection in console mode. This mode enables you to integrate the product with the Windows task scheduler as well as to execute projects prepared beforehand according to the schedule.

Console Mode Return Codes

The console mode returns a few codes. These codes can be used in batch files. There are:

- 0 - project executed successfully
- 2 - could not find or get access to project file
- 4 - could not restore default connection
- 8 - could not prepare output file
- 10- data generation error; check engine calls parameters or syntax

Hot Keys

Hotkey	Function or Option
Ctrl+0	Clear column checking (uncheck all)
Ctrl+1	Check all columns
Ctrl+D	Move the column down
Ctrl+E	Export file structure
Ctrl+I	Import file structure
Ctrl+L	View log file
Ctrl+N	Create new empty project file
Ctrl+O	Load Project file from the disk
Ctrl+R	Run the Project
Ctrl+S	Save Project file to the disk
Ctrl+U	Move the column up
F1	Open help
Ctrl+F1	Open help for Pattern Engine
F2	Open the connect window
F3	Close the database connection (disconnect)
F4	Run "Project Wizard"
F5	Open project properties window
F7	Open settings window
F9	Open variables window

Q: Can I run the tool in **console** mode?

A: [Yes](#).

Q: Can I use my own **Value Library** with DTM Flat File Generator?

A: No. You have to use \$File or \$MSAccess pattern engine function instead.

Q: Can I generate a few files per execution?

A: Yes, using console mode.

Q: How to unite two projects?

A: Use "Append project" feature. It appends columns from project file to active project.

Q: Can I change \$DATE\$ and \$TIME\$ macros format?

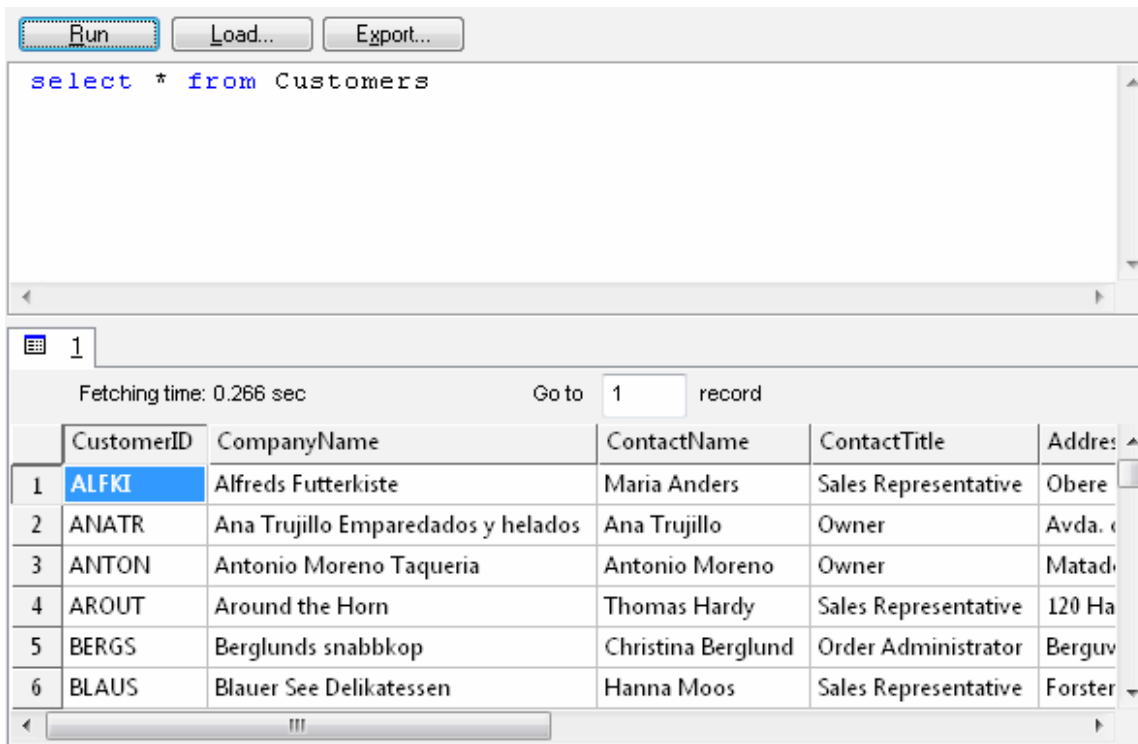
A: Yes, see [settings](#).

SQL Console

The tool has a special window where you can specify and execute any SQL statements. You can copy the results of executing a statement onto the clipboard or export it into various formats like text, SQL, HTML, XML or Microsoft Excel. Placing the mouse cursor over the column header will show the type of data stored in this field.

Important: the SQL console does not show any warning before data deletion or modifying.

Note: SQL console shows only begins of large strings. Typically you can view up to 512 first symbols.

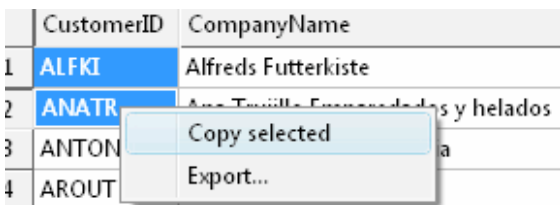


The screenshot shows the SQL Console interface. At the top, there are three buttons: "Run", "Load...", and "Export...". Below the buttons is a text area containing the SQL query: `select * from Customers`. Below the text area is a table with the following data:

	CustomerID	CompanyName	ContactName	ContactTitle	Address
1	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere...
2	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. c...
3	ANTON	Antonio Moreno Taqueria	Antonio Moreno	Owner	Matad...
4	AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Ha...
5	BERGS	Berglunds snabbkop	Christina Berglund	Order Administrator	Berguv...
6	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Forster...

Menu item "Load" allows you to read SQL script from the external file.

There is a picture of local menu accessed by the right click inside the results window.



The screenshot shows a close-up of the results window. A context menu is open over the first two rows of the table. The menu items are "Copy selected" and "Export...".

	CustomerID	CompanyName
1	ALFKI	Alfreds Futterkiste
2	ANATR	Ana Trujillo Emparedados y helados
3	ANTON	Antonio Moreno Taqueria
4	AROUT	Around the Horn



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What differences between the demo and full versions of the DTM Flat File Generator?

General functions

- Demo version allows user to generate not more than 100 rows per file.
- Demo version does not support "append mode".

Supplemental functions

- SQL console partially replaces result values to DEMO string.

No other demo limitations are present except nag-screen at program shutdown.

If you have some question or unusual problem feel free to contact the DTM Flat File Generator technical support at support@sqledit.com

When you contact technical support, you should be prepared to provide the following information:

- DTM Flat File Generator version (you can find this information from About menu item of Help menu).
- Type and version of the ODBC or IDAPI driver or OLE DB provider.
- DBMS version and operating system version (including service pack version, if applicable).
- DTM Flat File Generator Log file.
- A description of what you do before the problem occurs.
- Error messages you see when the problem occurs.
- Your name, company name and how to contact you.

See Also: [log_file](#)

Log file

When running the program, you have to select one of menu items from "**Tools->Log file**" in order to view or truncate your Log file. The log file contains the detailed description of any errors and other events that occurred while processing script.

Default log file location is product's directory and the name is ERROR.LOG. When the user has no enough permissions DTM Flat File Generator saves log to typical path like C:\Documents and Settings\\Application Data\FlatFileGen.log or C:\Users\\AppData\Roaming\FlatFileGen.log

The log file is a text file that contains three type of records:

1. The software product identification block: product name version and operating system information.
2. Error records: wrong SQL statements, exceptions, etc.
3. Notification and statistics.

Database catalog - The collection of system tables, tables that store metadata about that specific database.

Database record - one row in a table (table can be a result of SQL-query).

Database schema - logically connected, usually owner-based, set of DBMS objects (tables, views, procedures etc).

DBMS - database management system.

DBMS connection - the fact that both client and DBMS server have signed a contract and ready to query and data communications.

Drag-n-drop - the file manipulation technique when the mouse is used to move the file from the place of storage to the program, which performs processing.

SQL language - the declarative language used to manipulate the data and its' structure in the modern DBMS and their client applications.

IDAPI - Integrated Database Application Program Interface, unified DBMS access interface.

OCI - Oracle Call Interface, access interface for Oracle Server.

ODBC - Open Database Connectivity, unified DBMS access interface.

Metadata - information about data. See also: database schema

SQL statement - single SQL operator having the complete role in a data manipulation script.

SQL-server - program or program complex, which is able to execute the SQL-queries.

[DTM SQL Editor](http://www.sqledit.com/editor) (www.sqledit.com/editor) is a set of powerful database management tools that allow you to achieve two goals - to have unified access to different types of databases and to have a set of solutions that makes processing your data easy. DTM SQL Editor gives database users, developers and administrators an ability to access different databases, whether desktop or client-server ones (provided you have ODBC driver installed). This is very convenient, since most organizations use several different types of databases installed and each stores data in different formats and with varying parameters. Having a program that can get data from various sources is often essential. Furthermore, in addition to letting you quickly switch between different data sources, DTM SQL Editor lets you see database schema and results of the query execution.

[DTM Migration Kit](http://www.sqledit.com/mk) (www.sqledit.com/mk) is a powerful yet simple data migration tool that comes in handy if you run multiple databases. Use it to import, export or migrate data between different data sources (ODBC, OLE DB, or Oracle Call Interface supported). The program is fully automatic and supports all popular database formats. Simple visual interface lets you set own transformation and flow control rules to give you added flexibility.

[DTM Schema Reporter](http://www.sqledit.com/sr) (www.sqledit.com/sr) is a reporting tool for database schema. The program creates reports in RTF, HTML, XML or plain text formats and supports all common database interfaces - ODBC, OLE DB, or even Oracle Call Interface. This utility helps technical writers and database administrators create a report of any complexity level within seconds. Also, you can alter table order in the report and manually add annotations to the individual tables.

[DTM Data Generator](http://www.sqledit.com/dg) (www.sqledit.com/dg) is a simple, powerful and fully customizable utility that generates data for database testing purposes. Currently, database developers and administrators often have to spend hours of dull work to create test data sets before examining database performance. This tool makes all this unnecessary by automatically creating database objects AND sets of SQL statements, if necessary.

[DTM Data Editor](http://www.sqledit.com/de) (www.sqledit.com/de) is a data viewer and editor for database professionals who are tired of wasting their time on mundane tasks. The program uses form-based interface and works with any ODBC data source. SQL statements are generated automatically and can be modified later. For data that has foreign key - primary key relation, there are options to enter values manually or select them from a list, which is much faster.

[DTM DB Stress](http://www.sqledit.com/stress) (www.sqledit.com/stress) is a utility for stress testing the server parts of information systems and applications, as well as DBMSs and servers themselves. This tool allows you to create and configure a continuous set of requests to the server of the OLAP (query execution) and OLTP (adding, modifying and deleting data in the database) types. At the same time, the user can flexibly change both the number and the priority of this or that type of requests to a database or an application.

[DTM Data Modeler](http://www.sqledit.com/dm) (www.sqledit.com/dm) is a CASE tool for database developers that supports both forward and reverse engineering. It is an easy-to-use tool allowing you to work both with logical and physical data models in the form of an entity-relationship diagram. The product is intended for database architects and developers and works with data sources via the ODBC interface, which means compatibility with all modern DBMS. Along with basic model properties (sets of entities and relationships between them), the program allows you to create indexes and triggers on the physical level corresponding to the tables of the database that is modeled.

[DTM Data Scrubber](http://www.sqledit.com/scr) (www.sqledit.com/scr) is a set of intelligent tools for data verification (audit) and scrubbing (cleaning). Depending on user-defined rules and data properties, the program either creates a report about the actual state of affairs or performs database data correction.

[DTM Data Comparer](http://www.sqledit.com/dcmp) (www.sqledit.com/dcmp) is a visual tool for data compare and synchronization. The program successively views the contents of both tables basing on the order of ascending of unique key values and shows differences or creates synchronization script.

[DTM Schema Comparer](http://www.sqledit.com/scmp) (www.sqledit.com/scmp) is a tool for database schemas comparison and synchronization. The comparison process supports tables, views, indexes, triggers and stored procedures. The visual representation of database schemas as a tree makes the comparison process more comfortable.

[DTM Query Reporter](http://www.sqledit.com/qr) (www.sqledit.com/qr) is a reporting tool for database query. This utility helps technical writers, developers and database administrators create a report based on database query within seconds.

[DTM Schema Inspector](http://www.sqledit.com/si) (www.sqledit.com/si) is a database schema browsing and management tool that let you work with database schemas more effectively.

[DTM DB Event](http://www.sqledit.com/event) (www.sqledit.com/event) is a database monitoring and management tool. This utility allows the user to define a few situations (events). For each event the user can define what the program should do if the event is occur.

[DTM Flat File Generator](#). Easy to use tool that helps any developer or QA engineer to create test data file. It supports tab-delimited, CSV, fixed width and custom separated output files. The generator has powerful import and export file structure features.

[DTM Test XML Generator](#). The tool is powerful generator for XML documents with structure defined by user and random but realistic data. More than 30 predefined generators with powerful pattern engine. The rich import XML structure options are available.

[DTM Data Generator for Excel](#) is a tool for text Excel spreadsheet population. Easy to use interface based on predefined generators, rich value library and high performance.

[DTM Data Generator for JSON](#) produces JSON files with defined structure in a bulk manner. Fast and easy structure editor and smart import options helps the user to generate test set in a few clicks only.

[DTM Database Content Analyzer](#) is a statistical tool for database content. It collects a few dozens of most interesting data: database objects size, value frequency, clusters, etc. This tool replaces and extends "Statistics" report of obsolete versions DTM Schema Reporter.

Quick Start: [how to connect?](#)

There are five ways to connect to a database:

1. [Direct connection](#)
2. Connection to [desktop files](#)
3. [Data source](#) with ODBC, IDAPI or Oracle Call Interface (OCI)
4. [DSN File](#) connection
5. [OLE DB](#) connection

In all modes the "Test" and "Information" buttons, as well as tools for working with connection [profiles](#) are available. "Test" button allows you to check information you entered and/or data source (or alias) configuration.

See also:

- Troubleshooting [guide](#)
- Connection [information](#)
- Connection [profiles](#)